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Proposed Maximum Residue Limit PMRL2012-14

Difenoconazole

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has granted conditional registration to technical grade difenoconazole and the end-use product Inspire Fungicide for use in Canada on various fruit and vegetable commodities. The specific uses approved in Canada are detailed on the product label of Inspire Fungicide, *Pest Control Products Act* Registration Number 30004.

The evaluation of these difenoconazole applications indicated that the end-use product has merit and value and the human health and environmental risks associated with the new uses are acceptable. Details regarding these registrations can be found in Evaluation Report ERC2011-06, *Difenoconazole*, which was posted to the Health Canada website on 12 October 2011.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for difenoconazole is being conducted via this document (see Next Steps, the last section of this document). ERC2011-06 includes information regarding the proposed MRLs in Sections 3.5.4 and 7.1, and Appendix II addresses the international situation and trade implications. Supporting field trial residue data are provided in Appendix I, Table 5 of the Evaluation Report. This action also proposes to revise the residue definition for difenoconazole in or on livestock commodities to include a metabolite in accordance with Table 1 below.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Standards Council of Canada.

The proposed MRLs in Canada in or on food, to replace or be added to the MRLs already legally established for difenoconazole, are as follows.

Table 1 Proposed Maximum Residue Limits for Difenoconazole

Common Name	Residue Definition[1]	MRL (ppm)	Food Commodity
Difenoconazole	1-[[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl]methyl]-1*H*-1,2,4-triazole	35	Leafy Brassica greens (Crop Subgroup 5B)
		6.0	Green onions (Crop Subgroup 3-07B), raisins
		4.0	Grapes[a]
		1.9	Head and stem Brassica (Crop Subgroup 5A)
		0.7	Cucurbit vegetables (Crop Group 9)
		0.2	Bulb onions (Crop Subgroup 3-07A)
	1-[[2-[2-chloro-4-(4-chlorophenoxy)phenyl]-4-methyl-1,3-dioxolan-2-yl]methyl]-1*H*-1,2,4-triazole, including the metabolite α-[2-chloro-4-(4-chlorophenoxy)phenyl]-1*H*-1,2,4-triazole-1-ethanol	0.1	Liver of cattle, goats, hogs, horses and sheep [b]

ppm = parts per million

[a] The MRL is proposed to replace the currently established 0.1 ppm MRL for grapes.
[b] The 0.05 ppm MRL currently established for meat byproducts of cattle, goats, hogs, horses and sheep would be revised to exclude liver to accommodate the distinct liver MRL.

MRLs are proposed for each food commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

A complete list of all pesticide MRLs established in Canada can be found on the Maximum Residue Limits for Pesticides webpage in the Pesticides and Pest Management section of Health Canada's website.

[1] The current difenoconazole residue definition for all commodities is captured as "1-[2-[4-(4-chlorophenoxy)-2-chlorophenyl]-4-methyl-1,3-dioxolan-2-ylmethyl]-1*H*-1,2,4-triazole" but is revised to reflect current Chemical Abstracts Service (CAS) naming in accordance with Table 1. In addition, a metabolite is included in the proposed residue definition for liver commodities in this action, as per Table 1, and the same metabolite is proposed for addition to the residue definition for all other livestock commodities for which difenoconazole MRLs are already established.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the field crop trials used to generate residue chemistry data. For livestock commodities, differences in MRLs may also be due to different livestock feed items and practices.

Table 2 compares the MRLs proposed for difenoconazole in Canada with corresponding American tolerances and Codex Alimentarius MRLs[2]. American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. Codex MRLs have been established for the commodities specified in Table 2, as listed on the Codex Alimentarius Pesticide Residues in Food website.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Leafy Brassica greens (Crop Subgroup 5B)	35	35	Not established
Green onions (Crop Subgroup 3-07B)	6.0	6.0	0.3 (Leeks)
Raisins	6.0	6.0	0.1[a]
Grapes	4.0	4.0	0.1
Head and stem Brassica (Crop Subgroup 5A)	1.9	1.9	0.5 (Broccoli) 0.2 (Brussels sprouts, head cabbages, cauliflower)
Cucurbit vegetables (Crop Group 9)	0.7	0.7	Not established
Bulb onions (Crop Subgroup 3-07A)	0.2	0.2	0.02 (Garlic)
Liver of cattle, goats, hogs, horses and sheep	0.1	0.4	0.2 (Edible offal, mammalian)

[a] In the absence of a specified MRL for the processed commodity raisins, the MRL for grapes, the raw agricultural commodity, applies.

[2] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for difenoconazole up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs for difenoconazole and posting a corresponding Established Maximum Residue Limit document in the Pesticides and Pest Management section of Health Canada's website.